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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,410	10/16/2003	Jayadev Billa	BBNT-P01-016	7825
28120	7590	09/13/2007		
ROPES & GRAY LLP PATENT DOCKETING 39/41 ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			EXAMINER AZAD, ABUL K	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 09/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/685,410	Applicant(s) BILLA ET AL.	
	Examiner ABUL K. AZAD	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of 7-26 in the reply filed on July 5, 2007 is acknowledged.
2. This application contains claims 1-6 drawn to an invention nonelected without traverse in the reply. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 17-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Gillick et al. (US 5,715,367).

As per claim 17, Gillick teaches, "a speech recognition system comprising":

"a clustering tree configured to classify a series of sounds into predefined clusters based on one of the sounds and on a predetermined number of neighboring sounds that surround the one of the sounds" (col. 17, line 13 to col. 18, line 46); and

"a plurality of speech recognition models trained to recognize speech based on the predefined clusters, each of the plurality of speech recognition models receiving the predefined clusters from a different portion of the clustering tree" (col. 21, lines 26-53).

As per claim 18, Gillick teaches, "wherein the different portions of the clustering tree correspond to hierarchical levels in the clustering tree" (Fig. 23).

As per claim 19, Gillick teaches, "wherein higher ones of the hierarchical levels include nodes that correspond to more general questions than questions corresponding to nodes at lower ones of the hierarchical levels" (col. 10, lines 6-27).

As per claim 20, Gillick teaches, "wherein the plurality of speech recognition models include: a triphone non-crossword speech recognition model; a quinphone non-crossword speech recognition model; and a quinphone crossword speech recognition model" (col. 2, lines 37-67).

As per claim 21, Gillick teaches, "wherein the sounds are represented by phonemes" (col. 2, lines 37-67).

As per claim 22, Gillick teaches, "wherein the series of sounds include a sound being modeled and two context sounds before and after the sound being modeled" (col. 2, lines 37-67).

As per claim 23, Gillick teaches, "wherein the clustering tree comprises: decision nodes associated with questions that relate to the series of sounds, and terminal nodes that define a sound cluster to which the series of sounds belong" (col. 10, lines 6-48).

As per claim 24, Gillick teaches, "wherein the decision nodes and the terminal nodes are defined hierarchically relative to one another and the decision nodes and the terminal nodes are divided into levels, each of the levels being associated with a different one of the plurality of speech recognition models" (col. 10, lines 6-48).

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As per claim 25, Gillick teaches, "wherein the decision nodes correspond to lower ones of the levels in the hierarchically defined nodes are associated with more detailed questions than decision nodes corresponding to higher ones of the levels in the hierarchically defined nodes" (col. 10, lines 6-48).

As per claim 26, is rejected for the same reasons set forth in the rejection of claim 17.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillick et al. as applied to claim 17 above, and further in view of Kuhn et al. (US 6,711,541).

As per claims 7-16, Gillick does not explicitly teach, building first level of clustering tree and a second level of clustering tree as claimed in claims 7-16. However, Kuhn teaches, building first level of clustering tree and a second level of clustering tree as claimed in claims 7-16. therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Kuhn's teaching in the invention of Gillick because Kuhn teaches his invention provide high likelihood of scores and develop speech recognition models that are optimized to minimize confusability (Abstract).

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(571) 272-7599**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Patric Edouard**, can be reached at **(571) 272-7603**.

Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450


Alexandria, VA 22313-1450

Or faxed to: **(571) 273-8300**.

Hand-delivered responses should be brought to **401 Dulany Street, Alexandria, VA-22314** (Customer Service Window).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 4, 2007


Abul K. Azad
Primary Examiner
Art Unit 2626